

## ABSTRACT OF THE DISCLOSURE

The present invention provides a RANK (receptor activator of NF- $\kappa$ B) inhibitor consisted of a TRAF-6 (TNF receptor-associated factor-6) binding domain attached to a leader sequence. The decoy peptide inhibits RANKL (RANK ligand)-mediated osteoclast differentiation, thus indicating that targeted disruption of interaction between RANK and TRAF6 may prove useful as a therapeutic for metabolic bone disorders, leukemia, arthritis, and metastatic cancer of the bone.